6HJ5

Beam Power Tube

DUODECAR TYPE

Electrical:

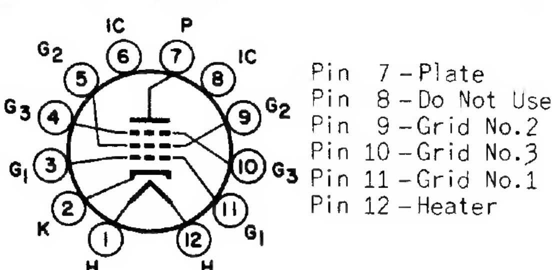
Heater Ratings and Characteristics:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	2.250	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200[a] max.	volts

Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	3.625"
Seated Length	3.000" to 3.250"
Diameter	1.437" to 1.563"
Dimensional Outline	See *General Section*
Bulb	T12
Base	Large-Button Duodecar 12-Pin (JEDEC No.E12-74)
Basing Designation for BOTTOM VIEW	12FL

Pin 1 - Heater
Pin 2 - Cathode
Pin 3 - Grid No.1
Pin 4 - Grid No.3
Pin 5 - Grid No.2
Pin 6 - Do Not Use



Pin 7 - Plate
Pin 8 - Do Not Use
Pin 9 - Grid No.2
Pin 10 - Grid No.3
Pin 11 - Grid No.1
Pin 12 - Heater

Characteristics, Class A_1 Amplifier:

				Triode Connection[b]	
Plate Voltage	40	60	135	135	volts
Grid-No.3 Voltage	*Connected to cathode at socket*		0	-	volts
Grid-No.2 Voltage	110	135	135	135	volts
Grid-No.1 Voltage	0	0	-22	-22	volts
Amplification Factor	-	-	-	4.2	
Plate Resistance (Approx.)	-	-	5000	-	ohms
Transconductance	-	-	10000	-	µmhos
Plate Current	400[c]	540[c]	80	-	ma
Grid-No.2 Current	42[c]	40[c]	5.5	-	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 1, grid-No.2 volts = 135, plate volts = 4500	-	-	-70	-	volts

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HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, *Design-Maximum Values:*

For operation in a 525-line, 30-frame system[d]

DC Plate Supply Voltage	770 max.	volts
Peak Positive-Pulse Plate Voltage[e]	7000 max.	volts
Peak Negative-Pulse Plate Voltage	1500 max.	volts
DC Grid-No.3 (Suppressor-Grid) Voltage[f]	70 max.	volts
DC Grid-No.2 (Screen-Grid) Voltage	220 max.	volts
Peak Negative-Pulse Grid-No.1 Voltage	330 max.	volts
Cathode Current:		
Peak	1000 max.	ma
Average	280 max.	ma
Grid-No.2 Input	6 max.	watts
Grid-No.2 Input (warm-up surge)[g]	12 max.	watts
Plate Dissipation[h]	24 max.	watts
Bulb Temperature (At hottest point on bulb surface)	240 max.	°C

Maximum Circuit Values:

Grid-No.1 Circuit Resistance:		
For grid-resistor-bias operation	1 max.	megohm

[a] The dc component must not exceed 100 volts.

[b] With grid No.2 connected to plate at socket.

[c] Instantaneous values.

[d] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

[e] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

[f] A positive voltage may be applied to grid No.3 to reduce interference from "snivets" which may occur in television receivers. A typical value for this voltage is 30 volts.

[g] Surge not to exceed 15 second duration.

[h] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.